



# LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 1 | Glossary of terms and  
list of abbreviations

November 2013

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list of abbreviations**

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# Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

A report prepared for High Speed Two (HS2) Limited:

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# 1 Glossary of terms

Term	Definition
abnormal possessions	See 'possession'.
absolute vibration criteria	Limits (or trigger levels) that identify whether vibration is likely to impact on a person's activities or the operation of vibration sensitive equipment.
abutment	A point where two structures meet, which support or anchor the end of a structure, viaduct or bridge.
accommodation/access road or track	A road/track that serves a piece of land or residential property and is not considered a public highway.
accumulated temperature	Median accumulated temperature above 0°C from January to June which gives a measure of heat energy input and soil drying potential and correlates with crop growth and yield.
adit	A nearly horizontal passage or tunnel that provides access to and from underground workings in a tunnel.
aggregate	Granular material (e.g. sand and gravel or crushed rock) that can be used for building and/or civil engineering purposes (e.g. for concrete production).
Agricultural Land Classification	The system devised and introduced by the Ministry of Agriculture, Fisheries and Food to classify agricultural land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. Land is graded from 1 (excellent quality) to 5 (very poor quality), with grade 3 subdivided into agricultural subgrades 3a and 3b. See 'Grade 1-5' and 'Subgrade 3a and 3b'.
agri-environment scheme	A mechanism by which landowners and other individuals and bodies responsible for land management can be incentivised to manage their land in a manner sympathetic to the environment.
air quality action plan	A plan that must be compiled by a local authority if it declares an air quality management area.
air quality exceedance	Where pollutant concentrations exceed an air quality standard.
air quality limit value	A maximum pollutant concentration to be achieved in the atmosphere, either without exception or with a permitted number of exceedances. Limit values are defined in European Union Directives and implemented in United Kingdom legislation.
air quality management area	If a local authority identifies any locations within its boundaries where the air quality objectives are not likely to be achieved, it must declare the area as an air quality management area. The local authority is subsequently required to put together a local air quality action plan.
air quality objective	Objectives are policy targets generally expressed as a maximum ambient pollutant concentration to be achieved. The objectives are set out in the UK Government's Air Quality Strategy for the key air pollutants.
air quality sensitive receptors	People, property, species or designated sites for nature conservation that may be at risk from exposure to air pollutants potentially arising as a result of a proposed development.
air quality standard	In this environmental statement, the term 'air quality standard' refers to air quality limit values and objectives.
as low as reasonably practicable	A principle that involves weighing a risk against the time and cost of controlling it.

<b>Term</b>	<b>Definition</b>
alluvial deposits	Natural materials deposited within and adjacent to rivers.
amenity	The benefits of enjoyment and well-being which are gained from a resource in line with its intended function. Amenity may be affected by a combination of factors such as: sound, noise and vibration; dust/air quality; traffic/congestion; and visual impacts.
ambient sound	A description of the all-encompassing sound at a given location and time which will include sound from many sources near and far. Ambient sound can be quantified in terms of the equivalent continuous sound pressure level, $L_{pAeq,T}$
anaerobic	Oxygen-deficient.
ancient woodland	Land that has been continually wooded since at least 1600.
annual average rainfall	Average amount of precipitation falling at a specified site recorded by the Meteorological Office, which gives a measure of the overall wetness of the local climate.
appraisal of sustainability	An assessment of the impact of plans, policies and programmes from an environmental, economic and social perspective.
appropriate assessment	An assessment (required under Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994) of the effects of a plan or project on the Natura 2000 network of European sites of nature conservation significance. The assessment focuses on the plan or project's implications for the site and any potential adverse impacts on its integrity.
aquifer	A geological formation that is sufficiently porous and permeable to store and yield a significant quantity of water to a borehole, well or spring.
arcGIS	Computer software-based geographic information system used for: creating maps; analysing information that has been mapped; and managing and compiling geographic data.
archaeological priority areas	Areas specified by a local planning authority to help protect archaeological remains that might be affected by development.
area of outstanding natural beauty	Area designated under Section 82(1) of the Countryside and Rights of Way Act 2000 for the purpose of conserving and enhancing its natural beauty.
at grade	On the same level (e.g., when a railway line is on the current ground level).
auto-transformer station	These accommodate switchgear and associated equipment and are located in the overall railway corridor at approximately 5km (3 mile) intervals. They allow the distance between an auto-transformer feeder station to be increased.
auto-transformer feeder station	These are permanent compounds, located adjacent to railways, which contain equipment to enable the transfer of electrical power between the National Grid network and the rail line.
balancing pond	Part of a drainage system that is used for temporarily storing and attenuating flood waters.
ballast	Graded stone, used for drainage and to form the track bed upon which railway sleepers are laid.
barrette retaining wall	A retaining structure constructed from reinforced concrete columns of a rectangular plan form with the long axis in the direction of retention.
basal layer	Unweathered parent material beneath subsoil. A layer upon which subsoil may be respread.

Term	Definition
base flow index	The proportion of a river's flow that comes from groundwater sources. Base flow sustains a river flow in dry weather.
bedrock	Rock that underlies loose deposits such as soil or alluvium.
bentonite	A natural clay that, when mixed with water, swells and forms a thixotropic gel (a particular type of viscous behaviour exhibited by some liquids). It can be used temporarily to support trenches or retaining walls, and helps to prevent collapse when they are being backfilled (i.e. refilled) or concreted.
best and most versatile land	Land defined as grade 1, 2 or 3a of the Agricultural Land Classification. This land is considered the most flexible, productive and efficient and is most capable of delivering crops for food and non-food uses.
best practicable means	Defined in the Control of Pollution Act 1974 and Environmental Protection Act 1990 as measures which are 'reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications'.
biodiversity	The variety of life in the world or in a particular habitat or ecosystem.
biodiversity action plan	A nationally used programme that addresses threatened species and habitats and seeks to protect and restore biological systems.
bored tunnel	Tunnel constructed by using a tunnel boring machine.
borehole	A hole bored into the ground, usually as part of investigations, typically to test the depth and quality of soil, rock and groundwater. A borehole can also be used to dewater the ground.
bridge deck	The road, railway or pedestrian walkway that forms the surface of a bridge.
bridge soffit	The underside of a bridge.
built heritage	A structure or building of historic value. These structures are visible above ground level.
bund	An embankment which acts as a visual or noise screen, or acts as a barrier to control the spillage of fluids.
buried heritage	A heritage asset beneath ground level, which may include earthworks.
cantilever	A structure supported or fixed at one end only.
calcareous soil	Soil which contains accumulations of calcium and magnesium carbonate, formed by the weathering of calcareous rocks and fossil shell beds.
captive trains	High speed trains that are designed to be used only across the European high speed rail network.
carbon budget	The total quantity of greenhouse gas emissions permitted in the United Kingdom over a specified period.
carbon dioxide equivalent	A metric measure used to compare the emissions from various greenhouse gases based on their global warming potential.
carbon footprint	The total greenhouse gas emissions associated with a particular policy or development.
catalytic effects (economic)	The stimulation of additional economic activity through the introduction of new infrastructure, such as a high speed rail network.
catenary system	General term used to describe all the overhead line equipment in the rail corridor.

<b>Term</b>	<b>Definition</b>
chainage	The distance (measured in metres) along the centre line of the HS2 route from a defined start point at Euston station, London.
circa	Meaning 'approximately', often used in a historical context in reference to a date.
civil engineering	A branch of engineering that deals with the design, construction and maintenance of the physical and naturally built environment. Examples of civil engineering works include construction of roads, railways and dams.
clay	An inorganic component of soil derived from the weathering of rock and comprising particles less than 0.002mm in equivalent diameter.
classic compatible trains	HS2 trains that will run on both the high speed track and the existing rail network.
classic line	The term that describes the existing UK rail network (excluding HS1).
climate	The climate can be described simply as the 'average weather', typically looked at over a period of 30 years. It can include temperature, rainfall, snow cover, or any other weather characteristic.
climate change	This refers to a change in the state of the climate, which can be identified by changes in average climate characteristics which persist for an extended period, typically decades or longer.
climate change adaptation	A change in natural or human systems in response to the impacts of climate change. These changes moderate harm or exploit beneficial opportunities and can be in response to actual or expected impacts.
climate change mitigation	Describes action to reduce the likelihood of an event occurring or reduce the impact if it does occur. This can include reducing the causes of climate change (e.g. emission of greenhouse gases), as well as reducing future risks associated with climate change.
Climate Change Risk Assessment	A Government-commissioned assessment of the risks posed to the United Kingdom by the changing climate.
Code of Construction Practice	Sets out the standards and procedures to which a developer or contractor must adhere to in order to manage the potential environmental impacts when undertaking construction.
cofferdam	A temporary enclosure built within a body of water or water-filled ground to regulate in-flow and out-flow of water.
combinable crops	All types of crop gathered by use of a combine harvester.
combustion plant	A piece of equipment that includes the combustion of a fuel for generating energy.
committed development	A development that has full or outline planning permission, or is allocated in an adopted development plan.
Committee on Climate Change	Independent advisory body, established under section 32 of the Climate Change Act 2008, tasked with helping the UK Government set and meet carbon budgets and adapt to climate change.
community forum area	Defined areas along the proposed HS2 Phase One route used for community engagement activities (e.g. Colne Valley community forum area).
compensation (ecology)	Measures taken to make up for the loss of, or permanent damage to, biological resources through the provision of replacement areas. Any replacement area should be similar to or, with appropriate management, have the ability to reproduce the ecological functions and conditions of those biological resources that have been lost or damaged.

Term	Definition
Compensation Code	See 'National Compensation Code'.
conceptual site model	Method used to manage identification of the various types of risk relating to contaminated land. The conceptual site model includes: categorisation of sources of contamination; categorisation of potential receptors; and identification of potential contamination pathways (i.e. linking sources to receptors).
confined aquifer	An aquifer that is confined between two layers of soil or rock that are much less pervious than the aquifer.
conglomerate	A rock that contains gravel or cobble size material within a finer grained matrix.
connectivity (ecology)	A measure of the functional availability of the habitats needed for a particular species to move through a given area. Examples include the flight lines used by bats to travel between roosts whilst foraging.
conservation area	An area designated under Section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990 as being of special architectural or historic interest and with a character or appearance which is desirable to preserve or enhance.
construction person year	Used to report construction labour, where one construction person year represents the work done by one person in a year, comprising a standard number of working days.
construction plant	Portable construction machinery and equipment.
construction sidings	Sites with connections to the National Rail network to allow excavated materials to either join the rail network from the Proposed Scheme construction areas, or to leave the rail network to enter the construction areas. Facilities at construction sidings will include offices and rail sidings to provide for the loading or unloading of construction material from rail wagons.
construction worksite	Sites where the construction of the various elements of the Proposed Scheme (e.g. viaducts, tunnels, ventilation shafts and headhouses, etc.) are undertaken.
contiguous bored pile wall	Closely spaced, bored piles which are used to form an underground wall, for the construction of a deep basement or cut-and-cover tunnel.
continuous monitoring station	Air quality monitoring sites which measure the levels of pollutants on a continuous basis, rather than as a long-term average.
controlled waters	Rivers, streams, estuaries, lakes, canals, ditches, ponds and groundwater as far out as the UK territorial limit. The statutory definition is provided in Section 104 (1) of the Water Resources Act 1991 and Section 30A (d) of the Control of Pollution Act 1974.
conurbation	A region comprising a number of cities, large towns and other urban areas that, through population growth and physical expansion, have merged to form one continuous urban and industrially developed area.
crop-adjusted available water capacity	A measure of moisture that plants can extract from the soil. Related to soil texture, soil structure, stoniness and depth of the soil that roots can exploit.
Crossrail	A new east-west rail line linking Maidenhead and Heathrow Airport in the west to Shenfield and Abbey Wood in the east, via tunnels under central London.
Considerate Constructors Scheme	A UK-wide scheme which promotes good practice on construction sites through its codes of considerate practice, which commit registered sites to be considerate and good neighbours, as well as being respectful, environmentally conscious, responsible and accountable.
county wildlife site	A site of important nature conservation value within a county context, but which is not protected under the Wildlife and Countryside Act 1981.

Term	Definition
culvert	A tunnel (pipe or box-shaped) carrying a stream or open drain under a road or railway
cumulative effect	<p>A combination of effects. The Scope and methodology report for HS2 Phase One defines a cumulative effect as:</p> <p>"incremental effects that result from the accumulation of a number of individual effects, either caused by the Proposed Scheme (intra-project effects) or by other reasonably foreseeable developments which would be under construction at the same time as HS2 or built later (inter-project effects)."</p>
curtilage	The area of land associated with the use of a building for a particular purpose.
cut-and-cover tunnel	Excavating a cutting, constructing a box-type structure and reinstating the ground over the top to its original level and surface features.
cutting	Excavation of earth material to lower the ground level to allow a railway to remain at the same level. Cuttings help to reduce noise and/or visual impacts associated with trains passing.
cryoturbation	The mixing of soils due to alternate freezing and thawing of water (see also: 'solifluction').
demographic character area	Areas used to collect baseline data below community forum area level. The purpose of the demographic character area is to build up a descriptive, contextual profile of local communities (e.g. number of people living in villages, towns, neighbourhoods).
decibel(s) or dB	Between the quietest audible sound and the loudest tolerable sound there is a million to one ratio in sound pressure (measured in Pascal (Pa)). Because of this wide range, a level scale called the decibel (dB) scale, based on a logarithmic ratio, is used in sound measurement. Audibility of sound covers a range of approximately 0-140dB.
decibel(s) A-weighted	The human ear system does not respond uniformly to sound across the detectable frequency range and consequently instrumentation used to measure sound is weighted to represent the performance of the ear. This is known as the 'A weighting' and is written as 'dB(A)'.
deck beams	A horizontal structural support element that is capable of withstanding a vertical load.
deck slab	The material that lies on top of the deck beams to create a surface.
Defra	The Government department responsible for policy and regulations on environmental, food and rural issues. The department's priorities are to grow the rural economy, improve the environment and safeguard animal and plant health.
delay (pedestrians)	Change in the 'person-minutes' of the journey times of pedestrians and other non-motorised travellers.
delay (traffic)	An increase in journey time for drivers and passengers due to increased congestion.
Department for Transport	The Government department responsible for transport issues in the UK (where not devolved).
deposition index	A dimensionless index value that considers the extent of sediment coverage on the stream bed.
design development	Process in which technical specialists (engineers and environmentalists) refine the design for the various elements of HS2 Phase One.
design life	The life expectancy of a proposed development.
development plan document	Documentation which seeks to guide development and planning in a local authority

<b>Term</b>	<b>Definition</b>
	area for a set period.
diamicton	Very poorly sorted sediment, often the result of glacial activity. They differ in structure, texture and thickness.
diaphragm wall	Embedded walls inserted into the ground which can be used as foundation walls, groundwater barriers or to isolate portions of contaminated ground.
diffusion tube	Diffusion tubes (samplers) are passive devices used in air quality monitoring to measure weekly or monthly average pollutant concentrations.
Directive	Legal obligations imposed on European member states by the European Commission.
discharge consent	Permission granted by the Environment Agency to discharge sewage or trade effluent directly into surface waters, groundwater or the sea.
displacement (economic)	Loss of local economic activity as a direct consequence of a proposed development.
dive under	Rail underpass structure where a line that splits passes below another line.
down line	Refers to the line of the route heading away from Euston Station, London.
drop inlet culvert	A form of culvert used on sloping ground where the water level has to be lowered to pass under a railway or road.
droughtiness	A physical limitation to the agricultural use of soils. It is a defined calculation in the Agricultural Land Classification guidelines which uses soil and climatic parameters to provide an estimate of likely moisture stress in 'standard' crops due to the crop's requirements for water exceeding the available water capacity of the soil.
dry valley	A valley, formed by water erosion, with no permanent surface stream. These typically occur in areas where porous rock (i.e. rock which absorbs water, such as chalk and limestone) is present.
dust	All airborne particulate matter.
earthworks	The removal or placement of soils and rocks such as in cuttings, embankments and environmental mitigation, including the in-situ improvement of soils/rocks to achieve the desired properties.
East Coast Main Line	The existing rail route connecting London King's Cross, Peterborough, Doncaster, Wakefield, Leeds, York, Darlington, Newcastle, Edinburgh and Aberdeen.
ecological status	The state of a water body, derived from a number of factors, including: the abundance of aquatic flora and fauna, nutrient availability, salinity, temperature and chemical pollution levels.
economically active	People who are either in employment or unemployed but available for employment.
ecosystem	Biological community of interacting organisms (e.g. plants and animals) and their environment.
effect	Used throughout this environmental statement to refer to the consequence of an impact to the receiving environment (see also: 'impact').
effluent	Liquid waste or sewage.
electricity pylon	A tall lattice-like structure (usually made of steel) which is used to support overhead power lines. Also known as a transmission tower.
electromagnetic compatibility zones	A bounded area in which specific levels of electromagnetic energy exist. Some electromagnetic compatibility zones contain higher levels of electromagnetic energy than others. In the railway environment, the area containing most energy in these

<b>Term</b>	<b>Definition</b>
	electromagnetic compatibility zones exists on the trackside.
electromagnetic field	The field of force associated with electric charge in motion, which has both electric and magnetic components and contains electromagnetic energy.
electromagnetic interference	Disturbance that affects an electrical system due to magnetic and electric fields, electromagnetic induction or electromagnetic radiation emitted from an external source.
English Woodland Grant Scheme	A portfolio of grants managed by the Forestry Commission to help promote the stewardship of existing woodlands, the creation of new woodlands and the delivery of public benefits from England's woods.
embankment	Artificially raised ground, commonly made of earth material, such as stone, on which the rail track is laid.
employment density ratio	Standard average floorspace per full-time equivalent member of staff, which varies by building use. Used to estimate the number of jobs that are accommodated in any given building
employment rate	The proportion of (16-74 year-old) residents in employment. Employment comprises the proportion of the total resident population who are 'in employment' and includes full-time students who are employed.
English Heritage	<p>Executive non-departmental public body created under Section 32 of the National Heritage Act 1983 to:</p> <ul style="list-style-type: none"> <li>- secure the preservation of ancient monuments and historic buildings situated in England;</li> <li>- promote the preservation and enhancement of the character and appearance of conservation areas situated in England; and</li> <li>- promote the public's enjoyment of, and advance their knowledge of, ancient monuments and historic buildings situated in England and their preservation.</li> </ul>
entry level stewardship	The basic level of Defra's Environmental Stewardship Scheme, intended to encourage a large number of farmers across a wide area to adopt simple environmental management practices, such as hedgerow management, low-input grassland, buffer strips and more sustainable arable options.
Environment Agency	Agency established to protect and improve the environment and contribute to sustainable development. Responsibilities include: water quality and resources, flooding and coastal risk management and contaminated land.
environmental impact assessment	A process to systematically assess the potential environmental effects of proposed development. An environmental impact assessment is a legal requirement for certain public and private projects in European Union countries under Directive 2011/92/EU.
environmental statement	A suite of documents providing the necessary environmental information in respect of an environmental impact assessment undertaken for a proposed development. It must include all information that is reasonably required to assess the potential significant environmental effects.
equivalent continuous sound pressure level or $L_{pAeq,T}$	An index used internationally for the assessment of environmental sound impacts. It is defined as the notional unchanging level that would, over a given period of time (T), deliver the same sound energy as the actual time-varying sound over the same period. Hence fluctuating sound levels can be described in terms of an equivalent single figure value.
European Union Emissions	A system designed to reduce greenhouse gas emissions using a cap-and-trade

<b>Term</b>	<b>Definition</b>
Trading System	framework.
excavated material	Largely natural soil and rock material that is removed from the ground during construction.
Exceptional Hardship Scheme	A purchase scheme for property owners whose properties may be affected by the plans for High Speed Two (HS2) between London and the West Midlands (Phase One).
extreme weather	Unusual, severe or unseasonal weather; or weather at the extremes of the range of weather seen in the past.
false cutting	A means of screening a linear feature (e.g. a railway) by forming embankments on both sides of the feature.
falsework	Scaffolding or other temporary structures used to support construction components until the construction is sufficiently advanced to allow the structure to support itself.
field capacity days	A meteorological parameter which estimates the duration of the period when soils are wet. Soils usually return to field capacity during the autumn or early winter. The field capacity period, measured in days, ends in the spring when evapotranspiration exceeds rainfall and a moisture deficit begins to accumulate in the soil. Opportunities for mechanised fieldwork are then possible without damaging the soil.
fill	Material used to artificially raise the existing ground levels.
floodplain	Land adjacent to a watercourse over which water flows or would flow in times of flood, but for defences in place.
Flood Zones 1, 2 and 3	<p>A flood zone area classification system devised by the Environment Agency:</p> <ul style="list-style-type: none"> <li>- Flood Zone 1: land outside the floodplain. There is little or no risk of flooding in this zone;</li> <li>- Flood Zone 2: the area of the floodplain where there is a low to medium flood risk; and</li> <li>- Flood Zone 3: the area of the floodplain where there is a high risk of flooding.</li> </ul>
footfall	The total number of pedestrians walking past a specific point (in either direction) within a period of time.
Forestry Commission	The Government department responsible for the protection, expansion and management of forests and woodland in England and Scotland.
formation (land quality)	A group of related rock strata with some common properties.
fragmentation (ecology)	The breaking-up of a habitat, ecosystem or land-use type into smaller parcels.
freeboard allowance	<p>The height from the maximum design level of a watercourse to:</p> <ul style="list-style-type: none"> <li>- the adjacent banks of an open channel, to provide a factor of safety against flooding; or</li> <li>- the soffit (underside) of any culvert or bridge above, to minimise the risk of blockage by floating debris, etc.</li> </ul>
full-time equivalent (employment)	Combines full and part-time employment to provide a standard measure of employment by working week. Someone who works 2.5 days a week would be counted as 0.5 full-time equivalent.
future baseline	The situation that would prevail should a proposed development not proceed.

<b>Term</b>	<b>Definition</b>
	Predicted impacts are compared against this theoretical scenario.
gabion	Large wire baskets filled with rock or aggregate, used as retaining walls or for erosion protection.
gazetteer	A dictionary that lists geographical features such as hills, rivers and places. In the case of this environmental statement, the gazetteer lists heritage assets that fall within the community forum areas, detailing their locations (with map references), heritage grade listings and a brief description of each.
glacial deposit	Natural materials laid down during the ice ages (Quaternary period).
glacio-lacustrine deposit	Natural materials laid down within lakes during the ice ages (Quaternary period).
gleying	The process in which anaerobic conditions arising from poorly drained soils result in the reduction of iron and other elements in the soil, causing soils to turn a largely grey-brown or grey colour, with ochreous mottles in localised aerated zones.
Grade 1 (Agricultural Land Classification)	'Excellent' quality agricultural land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter-harvested vegetables. Yields are high and less variable than on land of lower quality.
Grade 2 (Agricultural Land Classification)	'Very good' quality agricultural land with minor limitations that affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown, but on some land in the grade there may be reduced flexibility due to difficulties with the production of more demanding crops, such as winter-harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.
Grade 3 (Agricultural Land Classification)	Land with 'moderate' limitations. This affects the choice of crops that can be grown, the timing and type of cultivation, and harvesting or yield levels. The yields of more demanding crops are generally lower or more variable than on land in grades 1 and 2. See Subgrades 3a and 3b.
Grade 4 (Agricultural Land Classification)	'Poor' quality agricultural land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops), the yields of which are variable. In moist climates, yields of grass may be moderate to high, but there may be difficulties in utilisation. The grade also includes very droughty arable land.
Grade 5 (Agricultural Land Classification)	'Very poor' quality agricultural land with very severe limitations which restrict use to permanent pasture or rough grazing.
Grade I listed building	A listed building of exceptional interest, sometimes considered to be internationally important.
Grade II* listed building	A listed building of particular importance, of more than special interest.
Grade II listed building	Nationally important buildings that are of special interest.
grade separation	Vertical separation of a transport junction. For example, a bridge to carry vehicles over a railway line.
green belt	A designation for land around certain cities and large built-up areas, which aims to keep this land permanently open or largely undeveloped.
green bridge	A crossing that allows the safe passage of wildlife over rail lines.
green/brown roof	A roof placed on a building instead of a conventional roof which may be partially or fully covered in vegetation in order to benefit ecology.

<b>Term</b>	<b>Definition</b>
green spaces	Areas of natural or semi-natural land. For example parks, gardens and woodlands.
green tunnel	A cut-and-cover tunnel with soil spread on top to integrate into the landscape, thus minimising visual impacts and making the presence of a railway less noticeable. Access tracks and vegetation can be placed on the surface above the tunnel and it can be used for amenity, parkland and agricultural uses etc.
greenhouse gases	Atmospheric gases such as carbon dioxide, methane, chlorofluorocarbons, nitrous oxide, ozone, and water vapour that absorb and emit infrared radiation emitted by the Earth's surface, the atmosphere and clouds.
gross direct jobs	Jobs created during different phases of a project. In relation to the Proposed Scheme construction phase, gross direct jobs cover the construction workforce. During the operational phase, gross direct jobs refer to jobs directly related to the operation of the Proposed Scheme including the staffing of stations, trains and depots.
gross domestic product	Measure of the total economic activity in a country.
gross value added	Measure of the contribution to the economy of each individual producer, industry or sector in a country.
ground-borne vibration	Vibration generated by an event such as the pass-by of train in a tunnel, propagated through the ground or structure (i.e. not the air) into a receiving building.
ground-borne sound	Sound generated inside a building by ground-borne vibration.
groundwater	All water which is below the surface of the ground and within the permanently saturated zone.
groundwater body	A distinct volume of groundwater within an aquifer.
groundwater dependent terrestrial ecosystems	Wetlands which are directly dependent upon water from a groundwater body to maintain their form and function.
ground gas	Gases, including carbon dioxide and methane, which are generated within the ground and/or within landfills (commonly from the breakdown of vegetative matter).
groundwater source protection zone	Areas defined by the Environment Agency which show the risk from contamination/pollution to groundwater that is extracted for drinking water.
Habitat Suitability Index	A numerical index evaluating habitat quality and quantity for a particular species, where a value of one represents optimum habitat and a value of zero represents a habitat of no value.
haul roads	Temporary roads provided within a contractor's site area to allow for the movement of construction material, construction machinery and/or construction labour around the site.
head (land quality)	A natural material often with a wide variety of grain sizes, including angular gravel size fragments, formed by solifluction during the ice ages.
head deposits	A term for terrigenous sediments formed through a range of slope processes under periglacial conditions. Head deposits are generally composed of a clay matrix with a wide range of sizes of angular rock fragments.
headhouse	The above-ground structure which typically sits at the top of a ventilation shaft or tunnel portal. These structures can be used for housing control equipment or for providing emergency access to tunnels.
heavy metals	A loosely defined term which refers to a group of metal and metalloids, many of which can be toxic to some degree.

<b>Term</b>	<b>Definition</b>
heritage asset	A building, monument, site, place, area or landscape of historic value.
higher level stewardship	A specialist element of the Environmental Stewardship Scheme which is targeted at achieving significant environmental benefits in high priority areas, and involves more complex environmental management.
High Speed One	High speed rail line from St. Pancras International Station in London to the Channel Tunnel. Formerly known as the Channel Tunnel Rail Link.
High Speed Two	Proposed high speed rail line and associated infrastructure between London and the West Midlands (Phase One) and on to Manchester and Leeds (Phase Two).
High Speed Two Limited	The company set up by the Government to develop proposals for a new high speed railway line between London and the West Midlands and to consider the case for new high speed rail services linking London, northern England and Scotland.
Historic Environment Record	A record of all known archaeological finds and features and historic buildings and historic /landscape features, relating to all periods from the earliest human activity to the present day; maintained by each County and Unitary Authority in the United Kingdom.
hoarding	A temporary fence erected around a construction site.
hybrid Bill	Hybrid Bills mix the characteristics of public and private Bills. The provisions in a hybrid Bill would affect the general public, but would also have particular effects on specific individuals or groups.
hydrogeology	The nature, distribution and movement of groundwater in soils and rocks, including in aquifers.
impact	Used throughout this environmental statement to refer to changes to the environment that have the potential to occur as a result of the construction and/or operation of the Proposed Scheme (see also: 'effect').
in-combination effects	In-combination effects arise where community or business establishments are affected by a combination of a number of environmental effects (for example, from sound, noise and vibration; dust and air quality).
inert waste	Defined in Article 2(e) of the EU Landfill Directive (1999/31/EC) as waste that does not undergo significant physical, chemical or biological transformations.
infrastructure maintenance depot	Facility for the logistical support for the maintenance and repair of the HS2 railway track and associated infrastructure (excluding trains).
inorganic (contaminant)	Contaminants comprised primarily of metals, metal compounds, certain minerals, acids and alkalis.
integrity (ecology)	The ecological health of an area.
Interdepartmental Analysts Group	A cross-government multi-disciplinary peer review forum for policy appraisals and other analysis.
interlocking system	A signalling system to ensure the safe running of trains.
interoperability	Trains designed to operate across the European high speed network.
inter-project effects	The cumulative interaction of the Proposed Scheme with other projects (committed developments).
in-situ preservation (cultural heritage)	Preserving archaeological remains in their original position.
isolation (community and socio-	Physical and psychological barriers faced by users in accessing socio-economic and

<b>Term</b>	<b>Definition</b>
economic)	community resources, which may impact on their tendency to use them.
January 2012 announced route/scheme	Proposed HS2 Phase One route/scheme announced in January 2012, following public consultation between February and July 2011.
Kiss-and-ride (traffic and transport)	Drop-off point for car users at stations, airports and interchanges.
$L_{pA10\%,T}$	$L_{pA10\%,T}$ is the A-weighted sound pressure level obtained by using the fast time-weighting (F) that is exceeded for 10% of the time interval considered (denoted by T). It is generally used to describe road traffic noise.
$L_{pA90\%,T}$	$L_{pA90\%,T}$ is a parameter that is widely used to quantify background noise and generally reflects the soundscape in the lulls between individual events. It is the A-weighted sound pressure level that is exceeded for 90% of a given time interval, T, measured fast time-weighting (F) and quoted to the nearest whole number of decibels. Over a one-hour period, the $L_{pA90\%}$ will be the sound level exceeded for 54 minutes.
$L_{pAeq,T}$	See equivalent continuous sound pressure level
$L_{pAmax}$	$L_{pAmax}$ is the maximum A-weighted sound pressure level attained during a given time interval, T (30 seconds, 5 minutes etc.) It is normally measured using slow (S) or fast (F) time weighting. It is generally used when assessing the likelihood of night-time sleep disturbance.
landscape character area	Areas of landscape that have a broadly consistent pattern of topography, land use and vegetation cover.
laydown area	An area used for the temporary storage of construction equipment and supplies.
leakage (economic)	The amount of economic benefit that leaks out of the area of impact through processes such as commuters or the supply chain spending outside the local area.
LiDAR	Light detection and aerial ranging (LiDAR) is a high resolution remote sensing technology which uses a laser to measure distance between an aircraft and the ground, buildings and vegetation to create a three-dimensional model.
light goods vehicle	A motor vehicle used to carry goods with a total mass of up to 3.5 tonnes.
listed building	A building of special architectural or historic interest. Listed buildings are graded I, II* or II, with Grade I being the highest. Listing includes the interior, exterior and the setting of the building.
local access forum	Set up under the Countryside and Rights of Way Act 2000 to advise local highway or national park authorities on the improvement of public access for the purpose of outdoor recreation and enjoyment of the area.
local planning authority	The local authority or council that is empowered by law to exercise planning functions.
local development framework	Spatial planning strategy introduced in England and Wales by the Planning and Compulsory Purchase Act 2004. The local development framework contains a number of development plan documents prepared by the local planning authority that set the policies and development allocations for an area.
local wildlife site	Non-statutory sites of nature conservation value that have been designated 'locally'. These sites are referred to differently between counties with common terms including site of importance for nature conservation, county wildlife site, site of biological importance, site of local importance and sites of metropolitan importance.
lower super output area	Areas built up from output areas typically consisting of 400-1,200 households.

Term	Definition
made ground	Land where natural and undisturbed soils have largely been replaced by man-made or artificial materials. It may be composed of a variety of materials including imported natural soils and rocks with or without residues of industrial processes (such as ash) or demolition material (such as crushed brick or concrete).
maintenance loop	Additional track that will run for a short distance alongside the main HS2 rail line. During operation, the loops will be used for the storage of maintenance trains and to provide a safe stopping location for any HS2 train that develops a fault.
main construction compound	Strategic construction hubs for core project management (engineering, planning and construction delivery), commercial and administrative staff associated with the construction of the Proposed Scheme. They will include an area for equipment and materials storage, as well as providing main welfare facilities for construction staff, with some compounds also providing overnight sleeping accommodation for construction staff.
main river	A river maintained directly by the Environment Agency. They are generally larger arterial watercourses.
mass haul movement	The movement of excavated material from where it arises to where it is to be used, treated or disposed of. This may be undertaken via railway, road or within the area required for constructing the Proposed Scheme.
maximum sound level	The maximum level of sound identified during a given time interval, T.
micron	An alternative term for micrometre ( $\mu\text{m}$ ).
mined tunnel	Tunnelling method where self-supporting subsurface material (e.g. rock/hard clay) is present. It involves the use of drill and blast techniques or excavation/sprayed concrete lining to advance the excavation.
mineral planning authority	Unitary authorities that deal with all mineral planning issues within their areas. In parts of England with two tiers of local government (counties and districts), mineral planning authorities are the county councils. National Parks are also mineral planning authorities.
mineral safeguarding area	Areas defined by mineral planning authorities with known mineral resources that are of identified economic or conservation value.
modal shift	A shift from one transport type to another, e.g. road travel to rail travel.
moisture deficit (potatoes)	The calculated deficit between the water supplied by average summer rainfall at that location and the quantity of water required to grow a crop of potatoes, assumed to root to 70cm depth, at that location (without suffering from a lack of water). The larger the moisture deficit, the greater the likelihood of yields being reduced by droughtiness. In practice the deficit has to be met from soil water reserves, irrigation and/or by the crop wilting: the last reduces yields.
moisture deficit (wheat)	As above but for a wheat crop assumed to root to a depth of 120cm.
multiplier (economic)	An effect in economics in which an increase in direct spending produces an increase in national income and consumption that is greater than the initial amount spent. For example, building a factory will lead to the employment of construction and factory workers. This new employment will stimulate growth and employment in local services in the surrounding areas (e.g. cafes, restaurants, shops etc.), as new demand will be generated.
National Adaptation Programme	A programme established by the Government, industry and non-government organisations to help the UK adapt successfully to future weather conditions, by dealing with the risks and making the most of the opportunities.

Term	Definition
National Compensation Code	The national compensation code is the collective term for the principles derived from both statute and case law, relating to compensation for compulsory acquisition, which ensures that when land is needed to build an infrastructure project, the owners receive compensation to help them to move house or to relocate a business. The code also ensures that those who experience real, physical events, for example vibration or noise, from a scheme once it is in operation are entitled to compensation.
National Trust	A UK conservation charity protecting historic places and gardens and areas of countryside.
National Vegetation Classification	A comprehensive classification and description of the plant communities of Britain, administered by the Joint Nature Conservation Committee.
National vocational qualification	A qualification in a vocational subject set at various levels (e.g. levels two and three correspond to GCSEs and A-levels).
natural area	Sub-divisions of England, defined by Natural England, each with a characteristic association of wildlife and natural features. They provide a way of interpreting the ecological variations of the country in terms of natural features, illustrating the distinctions between one area and another.
Natural England	Executive non-departmental public body constituted under the Natural Environment and Rural Communities Act 2006 (section 2(1)) to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.
net (nett)	After all deductions have been made.
nitrate vulnerable zone	Areas covering 62% of England designated as a result of the European Union's Nitrates Directive in order to reduce the level of nitrates in surface and groundwater. Farmers with land in nitrate vulnerable zones have to follow mandatory rules to tackle nitrate loss from agriculture.
nitrogen dioxide	A gas produced when fuels are burned and is often present in motor vehicle and boiler exhaust fumes. It is an irritant to the respiratory system.
nitrogen oxides	A group of chemical compounds consisting only of nitrogen and oxygen which may be interconverted in the atmosphere. The principal oxides of nitrogen are nitric oxide and nitrogen dioxide.
noise barrier	A solid construction that reduces unwanted sound. It may take many forms including: engineering cutting; retaining wall; noise fence barrier; landscape earthworks; a 'low level' barrier on a viaduct; a parapet barrier on a viaduct; or any combination of these measures.
Nominated Undertaker	The body or bodies appointed to implement the powers of the hybrid Bill to construct and maintain the Proposed Scheme.
non-government organisation	Legally constituted organisation which is independent of government. It is ordinarily non-profit and may be organised at a local, national or international level.
non-hazardous waste	Any waste not defined as 'hazardous' under Directive 91/689/EEC. Examples include soils from ground/site clearance and demolition wastes.
non-plastic soil	Soils with coarse textures, i.e. sands and loamy sands, which do not exhibit plasticity (i.e. the ability of a soil to be deformed beyond the point where it cannot recover its original shape) at any moisture content.
non-technical summary	A report which, in the case of this environmental statement, briefly describes the main points discussed in the environmental statement without the use of technical

<b>Term</b>	<b>Definition</b>
	language.
niche (ecology)	The role that a species plays in an ecosystem. Dimensions of a species's niche include their food and time of feeding and the chemical and physical make-up of their environments (e.g. water salinity, temperature).
nitrate vulnerable zone	Areas designated under the EU Nitrates Directive (91/676/EEC) in order to reduce the level of nitrates in surface and groundwater. Farmers with land in nitrate vulnerable zones have to follow mandatory rules to manage nitrate loss from agriculture.
Ordnance Datum	Ordnance Datum refers to the height above mean sea-level, taken from a reference point at Newlyn, Cornwall. This is the national height system for Britain.
offline	Not connected or currently in use. Used in engineering in relation to railways, roads, pipelines etc.
off-route effects	Effects of the Proposed Scheme that may occur at locations beyond the HS2 Phase One route corridor.
online	Connected or currently in use. Used in engineering in relation to railway, roads, pipelines etc.
opportunity area	Brownfield land in London that has significant capacity for new housing, commercial and other development linked to existing or potential improvements to public transport accessibility.
Opportunity Area Planning Framework	Supplementary planning documents produced to guide development in opportunity areas in London.
Ordnance Survey	The national mapping agency for Britain.
organic (contaminant)	Contaminants composed primarily of oils, tars or solvents.
Organic Entry Level Stewardship	A specialist element of the environmental stewardship scheme which is open to all organic farmers with land registered as organic or in organic conversion, and with similar management options to entry level stewardship.
output areas	Geographically defined areas based on postcode units which have been used since the 2001 Census for statistical purposes in relation to socio-economic information.
overbridge	A bridge crossing over a transport corridor (e.g. a railway line).
overhead line equipment	Electric traction supply wires suspended over the track, providing power supply to trains.
oversite development	A development not related to the operation of the Proposed Scheme that can be built over and around the scheme's operational structures (e.g. above stations).
package substation	A small remote substation providing electrical power to track-side equipment.
palaeoenvironmental	An environment at a period in the geological past.
pantograph	A device that is attached to the roof of an electric train to collect power through contact with the overhead catenary wire.
parapets	A wall along the edge of a structure (e.g. a bridge), to protect people from sudden drops.
park pale	An historic palisade used to enclose deer within a defined area.
particulate matter	Discrete particles in ambient air, with diameters ranging between nanometres (billions of a metre) to micrometres (millionths of a metre).

Term	Definition
pathways	The routes by which pollutants are transmitted through air, water, soils, plants and organisms to their receptors.
peak particle velocity	The peak particle velocity is the maximum velocity that is recorded during a particular vibration event. It is commonly used to assess the potential for damage to structures due to ground-borne vibration.
Pendolino trains	Trains that tilt to enable them to travel around curves faster than trains without this technology.
people mover	A transit system, proposed for use within the Proposed Scheme to connect Birmingham Interchange Station, the National Exhibition Centre, Birmingham International station and Birmingham Airport.
permissive path	A path which is not a public right of way, but which the landowner permits the public to use. The landowner can close the path for periods of time.
phase 1 habitat survey	A habitat classification and field survey technique to record semi-natural vegetation and other wildlife habitats.
Phase One	Phase One of the proposed HS2 network, a high speed railway between London and the West Midlands with a connection via the West Coast Main Line at conventional speeds to the North West and Scotland, and to the Channel Tunnel via HS1. Phase One includes stations at Euston in London, Old Oak Common (in West London), Birmingham Interchange (near the National Exhibition Centre and Birmingham Airport) and Curzon Street (in Birmingham city centre).
Phase Two	Phase Two of the proposed HS2 network would extend the high speed railway beyond the West Midlands to Manchester and Leeds, with connections to conventional railway lines via the West Coast and East Coast Main Lines.
photomontage	Inserting an image of the Proposed Scheme onto a photograph for the purpose of creating an illustrative representation of potential changes to existing views.
piling	Driving and embedding piles of wood, concrete or steel deep into the ground, to support buildings/structures at the foundation level.
plastic soil	Soil with a relatively high proportion of silt and clay that, within a certain moisture content range, is capable of being moulded or deformed without rupture.
PM2.5	PM2.5 is any particulate matter with an aerodynamic diameter equal to or less than 2.5 micrometres.
PM10	PM10 is any particulate matter with an aerodynamic diameter equal to or less than 10 micrometres.
ponding	The collection of standing water at the ground surface due to the presence of an impermeable layer within the soil.
porous (tunnel) portal	Porous portals are perforated structures at tunnel portals (entrances), usually formed of concrete, designed to allow the passage of air from the tunnel. These are required to reduce both air pressure changes and the noise generated when a high speed train enters or leaves a tunnel.
portal ramp	A ramp that takes the rail track from ground-level down to the tunnel level.
possession	When a section of rail line is required for maintenance, repair or renewal and when trains cannot run, it is handed over by the operators to the engineering contractors, who take possession for a specified period. Where this possession occurs for longer than the standard possession, it is referred to as an abnormal possession.
principal aquifer	These are layers of rock or drift deposits that have high intergranular and/or fracture permeability, meaning they usually provide a high level of water storage and

Term	Definition
	transmission. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifers.
promoter	The organisation promoting the hybrid Bill for Phase One of HS2.
Proposed Scheme	The proposed high speed rail line and associated infrastructure between London and the West Midlands (i.e. Phase One of HS2).
public realm	Outdoor areas in towns and cities which are accessible to the public.
public right of way	A highway where the public has the right to walk. It can be a footpath (used for walking), a bridleway (used for walking, riding a horse and cycling), or a byway that is open to all traffic (include motor vehicles).
Q95 flow	A measure of low flow, defined as the flow in a water course equalled or exceeded 95% of the time.
quaternary	The most recent period of geological time, approximately equated to the period of the ice ages to the present day.
Quiet Area	An external space identified as such by local authorities under the Environmental Noise Regulations.
quiet area	Areas defined in the Scope and Methodology Report for HS2 Phase One as either Quiet Areas (identified as such under the Environmental Noise Regulations) or resources that are prized for providing tranquillity.
railhead	Sites at strategic locations along the route with connections to the National Rail network. They will be used as the delivery location for bulk rail-borne materials, such as ballast, rails, sleepers etc.
RailPlan	Transport for London's strategic public assignment model that covers all National Rail, London Underground, London Overground, trams, Docklands Light Rail and bus movements in London. The model is used to simulate public transport movements and to generate statistics based on travel demand from the London Transport Strategy model.
railway corridor	The area in which the railway tracks are located. In the case of HS2, this corridor will typically be 19m wide (excluding fences) and include two tracks, overhead line equipment, track drainage, electricity cables, lineside paths and ducting for fibre optic communications.
Ramsar site	Wetland sites that are of international importance, as designated under Article 2(1) of the Convention on Wetlands of International Importance especially as Waterfowl Habitat. Ramsar (Iran), 2 February 1971. UN Treaty Series No. 14583.
receptor	A component of the natural or built environment (such as a human being, water, air, a building or a plant) affected by an impact of the construction and/or operation of a proposed development.
remediation	The process of removing a pollution linkage (i.e. by removing one or more of the elements in a source-pathway-receptor linkage) in contaminated land in order to render an acceptable risk. Usually this involves a degree of removal of contaminants and/ or blockage of pathways.
retained cutting	A cutting which is constructed with additional structural support that allows a steeper overall slope gradient than would be naturally possible. This may be a partially retained cutting, which would include an element of naturally supported slope (usually above the retained element) or a fully retained cutting, which usually has vertical sides.

Term	Definition
retained embankment	An embankment which is constructed with additional structural support (usually in the form of a retaining wall) that allows a steeper overall slope gradient than would be naturally possible. This may be a partially retained embankment, which would include an element of naturally supported slope (usually above the retained element) or a fully retained embankment, which usually has vertical sides.
Register of Historic Battlefields	English Heritage's non-statutory register which identifies important English battlefields. Its purpose is to offer them protection and to encourage a greater understanding of their significance.
Register of Historic Parks and Gardens	English Heritage's non-statutory register which identifies over 1,600 sites of historic interest in England assessed to be of national importance. Its purpose is to offer them protection and to encourage a greater understanding of their significance.
restoration (ecology)	The re-establishment of a damaged or degraded system or habitat to a level similar to its original condition.
ripping	Loosening soil or rock by drawing a forked/pronged implement through it.
riparian area	The interface between land and a river or stream.
risk assessment	An assessment of the probability of a hazard occurring that could result in an impact.
river basin management plan	Plans developed under the EU Water Framework Directive setting out environmental objectives for all groundwater and surface water bodies and protected areas within a river basin district.
river corridor survey	The mapping of vegetation and physical features along the watercourse corridor using standard symbols, with cross-sections of river channel form, including land to either side of the river channel.
river habitat survey	A survey method designed to characterise and assess the physical structure of watercourses involving the recognition of vegetation types and an understanding of basic geomorphological principles.
road head	Sites where excavated materials from the Proposed Scheme leave or enter the construction worksites from the public roads.
road rail vehicle	A vehicle which can operate both on rail tracks and road, often used for railway maintenance.
rolling stock	Passenger or freight vehicles that operate on a railway.
rolling stock maintenance depot	A rolling stock maintenance depot is a workshop where train maintenance is carried out.
route-wide effects	Effects of the Proposed Scheme that may occur at a geographical scale greater than the community forum area level.
Royal Assent	The final step required for any parliamentary Bill to become law.
ruderal vegetation	Vegetation that is able to grow despite poor soil quality or limited soil cover. Often the first to colonise previously disturbed land.
runoff	The flow of water over the ground surface.
Rural Payments Agency	The Defra agency that administers payments to farmers and traders.
sand	Soil particles from 0.06mm-2.0mm in equivalent diameter. Fine sand particles are from 0.06mm-0.2mm; medium sand from 0.2mm-0.6mm; and coarse sand from 0.6mm-2.0mm.
satellite construction compound	Smaller in size than main construction compounds, providing office accommodation

<b>Term</b>	<b>Definition</b>
	for limited numbers of staff associated with the construction of the Proposed Scheme. Welfare facilities for staff will also be provided.
saved policies	Policies within unitary development plans, local plans and structure plans that are saved for a time period during replacement production of local development documents.
scheduled monument	Nationally significant heritage assets protected by the Ancient Monuments and Archaeological Areas Act 1979.
section 61 consent	Consent issued pursuant to section 61 of the Control of Pollution Act 1974.
secant pile wall	Method of construction using interlocking piles. After a first set of primary piles are inserted, secondary piles are set using concrete to fill the space between the primary piles.
secondary aquifer	<p>There are two types of secondary aquifer designation:</p> <ul style="list-style-type: none"> <li>- Secondary A: permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers; and</li> <li>- Secondary B: predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.</li> </ul>
scoping	An initial stage in the environmental impact assessment process to determine the nature and potential scale of environmental effects arising as a result of a proposed development, and an assessment of what further studies are required to establish their potential environmental impacts and effects.
screening	The first stage in an environmental impact assessment used to determine if further assessment is necessary.
setting (cultural heritage)	The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive, negative or neutral contribution to the significance of an asset and may affect the ability to appreciate it.
severance	Used to refer to a change in ease of access for non-motorised users due to, for example, a change in travel distance or travel time or a change in traffic levels on a route that makes it harder for non-motorised users to cross. A reference to severance in this environmental statement does not necessarily imply a route is closed to access.
silt	Soil particles from 0.002mm to less than 0.06mm in equivalent diameter.
site of biological importance	A non-statutory designation used by some local planning authorities to protect locally valued sites of biological diversity described as local wildlife sites by the UK Government.
site of borough importance	A site of importance for nature conservation within London from a borough perspective.
site of importance for nature conservation	Usually selected within a local authority area. This process is often managed by the local wildlife trust together with representatives of the local authority and other local wildlife conservation groups. They support both locally and nationally threatened wildlife, and many sites contain habitats and species that are priorities under the county or UK biodiversity action plans.

<b>Term</b>	<b>Definition</b>
site of metropolitan importance	A site of importance for nature conservation within London at a London-wide level. They contain examples of London's habitats, may have rare species, or have significance in built-up areas.
site of special scientific interest	Area of land notified by Natural England under Section 28 of the Wildlife and Countryside Act 1981 as being of special interest due to its flora, fauna or geological or physiological features.
site waste management plan	The Site Waste Management Plans Regulations 2008 require any person intending to carry out a construction project with an estimated cost greater than £300,000 to prepare a site waste management plan. A site waste management plan should identify the types and quantities of waste that will be generated and discuss the potential to reduce, re-use and recycle all materials wherever possible.
slewing	Moving a rail track sideways so it is better aligned.
slowly permeable layer	A layer at least 15cm in thickness with the upper boundary within 80cm of the ground surface and with soils that impede the downward movement of excess rainfall.
SMART targets	Targets or objectives set against a five-point criteria: specific, measurable, attainable, realistic and time-bound.
soil	The upper layer of the earth's crust, in which plants grow. It consists of weathered rock, organic matter, air spaces and water. Descriptions usually identify the relevant characteristics of its (usually) horizontal layers in terms of their significance for soil characteristics and crop growth, usually to a depth of 1.2m.
soil association	A group of related soil types or soil series developed from a similar geological parent material.
soil compaction	The removal of pore spaces within soil structures and drainage channels between soil structures. This inhibits root penetration and the movement of air and water in soil.
soil erosion	The detachment and movement of soil by the action of water and/or wind.
soil moisture deficit	The difference between the maximum amount of water potentially stored in drained soil and the amount remaining after some of the water has been transpired by growing vegetation.
soil profile	A vertical cross-section through a soil.
soil resource	The textures, structures and volume of different qualities of topsoil and subsoil that have a potential for beneficial reuse.
soil sealing	Covering the soil surface with an impermeable material.
soil structure	The combination or aggregation of soil particles into larger compound units (or peds) with pore spaces and channels between that allow the flow of air and water and the penetration of roots. The secondary units are characterised and classified on the basis of size, shape and degree of development.
soil texture	The relative proportion of the various soil particle size fractions in a soil (sand, silt and clay).
solifluction	The slow downhill movement of near-surface soils caused by the alternate freezing and thawing of contained water.
sound exposure level	The sound level at a receptor which, if maintained at a constant level for a period of one second, would have the same amount of energy as a given event (of any duration) at the same receptor.

Term	Definition
sound power level	The sound power level ( $L_w$ ) of a source is a measurement of the total acoustic power it radiates. The sound power level is an intrinsic characteristic of a source (analogous to its volume or mass), which is not affected by the environment within which the source is located.
sound pressure level	The parameter by which sound levels are measured in air. It is measured in decibels. The threshold of hearing has been set at 0dB, while the threshold of pain is approximately 120dB. Normal speech is approximately 60dB at a distance of 1 metre and a change of 3dB in a time varying sound signal is commonly regarded as being just detectable. A change of 10dB is subjectively twice, or half, as loud.
span	The horizontal distance between two supports of a structure (e.g. piers of a bridge or viaduct).
stabling	The parking of trains whilst out of operational service.
Station Travel Plan toolkit	A guide produced by the Association of Train Operating Companies on station travel plans.
statutory consultee	Organisations and bodies, defined by statute, which must be consulted on relevant planning matters.
statutory undertaker	<p>Defined in Section 98(6) of the Environmental Protection Act 1990 as:</p> <ul style="list-style-type: none"> <li>- any person authorised by any enactment to carry on any railway, light railway, tramway or road transport undertaking;</li> <li>- any person authorised by any enactment to carry on any canal, inland navigation, dock, harbour or pier undertaking; or</li> <li>- any relevant airport operator (within the meaning of Part V of the Airports Act 1986).</li> </ul>
stopped-up	The permanent closure of a public right of way.
Strategic Road Network	Motorways and major trunk roads in England.
structure plan	The planning policy document prepared by a county council, which sets out the strategic policy framework for the county.
Subgrade 3a (Agricultural Land Classification)	'Good quality' agricultural land that is capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
Subgrade 3b (Agricultural Land Classification)	'Moderate quality' agricultural land that is capable of producing moderate yields of a narrow range of crops, principally cereals and grass, or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
subsoil	Weathered soil layer extending between the natural topsoil and the unweathered basal layer (geological parent material) below, or similar material on which topsoil can be spread. Subsoil has lower organic matter and plant nutrient content than topsoil. In most cases topsoils require a subsoil to perform one or a number of natural soil functions.
subsoiler	Similar to a ripper but often with wings on the foot of the tines to increase soil heave and shatter.
substructure	The foundations or supporting part of a structure below ground level.
superficial deposit	A geological deposit that was laid down during the Quaternary period. Such deposits were largely formed by river and glacial processes but can also include wind-blown

<b>Term</b>	<b>Definition</b>
	deposits known as loess.
superstructure	The part of a structure above ground.
sustainable transport	This refers to any type of transport that has lower impacts on the environment and is more fuel efficient than traditional travel by single occupancy private motor vehicle. This includes walking, cycling, public transport and car sharing.
surface water	Waters including rivers, lakes, loughs, reservoirs, canals, streams, ditches, coastal waters and estuaries.
surplus excavated material	Excavated material becomes surplus if: its irrecoverable physical, chemical or biochemical quality prevents it from being used in the Proposed Scheme; there is more material than required for the Proposed Scheme; or the requirement for a type of material is too far away from the excavation point to make its use practicable.
sustainable drainage systems	Measures designed to control surface runoff close to its source, including management practices and control measures such as storage tanks, basins, swales, ponds and lakes. Sustainable drainage systems allow a gradual release of water and thereby reduce the potential for downstream flooding.
sustainable placement	The on-site placement for disposal of surplus excavated material to avoid causing environmental effects (e.g. transport) that would otherwise be associated with the off-site disposal of that material. 'On-site' in this context means within the land required for the purposes of the Proposed Scheme and 'off-site' means external land (or landfill site) which is not specifically required for the purposes of the Proposed Scheme.
sustainable placement area	An area used for sustainable placement.
till	An unsorted glacial sediment deposited directly by a glacier.
topsoil	Upper layer of a soil profile, usually darker in colour (because of its higher organic matter content) and more fertile than subsoil, and which is a product of natural biological and environmental processes.
trackout	The movement of dust and dirt from the construction/demolition site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network.
traffickability	The capability of a soil to bear traffic (vehicles, livestock or people) without causing any physical damage to it or impairing its functions.
tranquillity	A state of calm or quiet.
translocation	Transporting and release of species or habitats from one location to another. For example, if an area of land is required permanently for a new development, species can be moved from that site to a suitable alternative location.
transmission tower	See 'electricity pylon'.
Transport for London	A statutory body, created under section 154 of the Greater London Authority Act 1999, with responsibility for London's transport system.
tree preservation order	An order made by a local planning authority, under the Town and Country Planning Act 1990, in respect of trees or woodlands. The principal effect of a tree preservation order is to prohibit the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees without the local planning authority's consent.
truss	A framework of beams, posts and struts that support a structure (e.g. a roof), or span an opening.

<b>Term</b>	<b>Definition</b>
tunnel drive	The process of tunnel excavation and lining.
tunnel drive launch shaft	Vertical excavation to form the starting point to launch a tunnel boring machine.
tunnel boring machine	A tunnelling machine, which consists of a rotary cutting head that occupies the full face of the tunnel. A system of conveyors or pumps is used to remove the excavated material.
tunnel portal	Tunnel entrances and exits.
two-way trips	A person trip is a one-way journey by one person by any mode of transport, including walking, cycling, privately operated motor vehicles, or any public transport modes. A vehicle trip is a one-way journey by a single privately operated motor vehicle regardless of the number of persons in the vehicle. Two-way trips refer to the total number of vehicle movements in both directions (i.e. with 200 westbound vehicles and 100 eastbound, there would be 300 two-way trips)
United Kingdom Climate Impacts Programme	Established in 1997 by the United Kingdom Government to coordinate and influence research into adapting to climate change, and to disseminate knowledge and tools for users to consider their climate risks and plan to adapt.
United Kingdom Climate Projections 2009	The United Kingdom Climate Projections provide future projections of climate change for different time periods and different possible scenarios of greenhouse gas emissions. These illustrate a range of possible future changes to the United Kingdom's climate.
underbridge	A bridge crossing under a transport corridor (e.g. a rail line).
unitary development plan	A statutory document that sets out the council's planning policies for development, conservation, regeneration and environmental improvement activity.
unemployment rate	The proportion of residents unemployed as a percentage of the economically active population.
unexploded ordnance	Explosives that did not explode when deployed and thus still pose a risk of detonation.
unproductive strata	Layers of rock or superficial deposits with low permeability or porosity that have a negligible significance for water supply.
up line	The line of the route heading towards Euston station, London.
vehicle movement	A journey made by a vehicle that can either be a one-way or two-way trip.
ventilation (and intervention) shafts	Shafts located at intervals along the length of a tunnel and used for ventilation and emergency access/exit.
viaduct	A bridge like structure composed of a series of spans, used to carry roads and railways across valleys and other depressions.
vibration dose value	Defined in BS6472-1(2008) as: a relationship that yields a consistent assessment of vibration which correlates well with subjective response.. It is used to estimate the probability of adverse comment which might be expected from human beings experiencing vibration in buildings. Consideration is given to the time of day and use made of occupied space in buildings, whether residential, office or workshop.
viewpoint	A place from which something can be viewed.
visual receptor	People who may have a view of the Proposed Scheme during construction or operation.
vulnerable road users	In this environmental statement, defined as all pedestrian, cyclists and equestrians.

<b>Term</b>	<b>Definition</b>
West Coast Main Line	Inter-urban rail line connecting London, Birmingham, Manchester, Liverpool and Glasgow.
wetness class	Soil wetness is classified according to the depth and duration of waterlogging in the soil profile. Six wetness classes are identified, ranging from 'very well drained' to 'very poorly drained'.
wetness limitation	A soil wetness limitation exists where the soil water regime adversely affects plant growth or imposes restrictions on cultivations or grazing by livestock.
Y network	Completed HS2 network (both Phase One and Two), comprising a high speed rail line between London and the West Midlands, then splitting into two lines, one continuing to Manchester and the other to Leeds via the East Midlands.
zone of theoretical visibility	The likely (or theoretical) extent of visibility of a development, usually shown on a map.

## 2 List of abbreviations

### 2.1 Symbols and units of measurement

Abbreviation	Meaning
<	is less than
$\leq$	is less than or equal to
>	is more than
$\geq$	is more than or equal to
©	copyright
%	per cent
£	pound sterling
ASPT	average score per taxon
A/m	amperes per metre
CaCO <sub>3</sub>	calcium carbonate
CH <sub>4</sub>	methane
cm	centimetre
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
dB	decibel
dB(A)	decibel A-weighted
µg/m <sup>3</sup>	micrograms per cubic metre
gCO <sub>2</sub> e	grams of carbon dioxide equivalent
GHz	gigahertz
g/yr	grams per year
hr	hour
ha	hectare
hectad	an area of 10km <sup>2</sup>
Hz	hertz
kg	kilogram
km	kilometre
km <sup>2</sup>	square kilometre

Abbreviation	Meaning
kph	kilometres per hour
kV	kilovolt
kV/h	kilovolts per hour
kW·h	kilowatt hour
µm	micrometre
m	metre
m <sup>2</sup>	square metre
m <sup>3</sup>	cubic metre
m <sup>3</sup> /d	cubic metres per day
m <sup>3</sup> /s	cubic metres per second (also known as cumecs)
m/s	metres per second
mm/s	millimetres per second
N	nitrogen
NO	nitrogen oxide
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
min	minute
mm	millimetre
mph	miles per hour
MtCO <sub>2</sub> e	mega tonne of carbon dioxide equivalent
MW	megawatt
pa	per annum
p/hr	per hour
pkm	passenger kilometre
µT	microtesla
RFC	ration flow capacity
tCO <sub>2</sub> e	metric tonne of carbon dioxide equivalent
tph	trains per hour
V	volt
v/c	volume of capacity ratio
vpd	vehicles per day
vph	vehicles per hour

## 2.2 Acronyms and initialisms

Abbreviation	Meaning
AADT	annual average daily traffic
AAR	annual average rainfall
AAWT	annual average weekday traffic
ACM	asbestos containing material(s)
AD	Anno Domini
AEP	annual exceedance probability
AHVLA	Animal Health and Veterinary Laboratories Agency
ALC	Agricultural Land Classification
ANL	Acton to Northolt Line
AOD	above Ordnance Datum
AONB	area(s) of outstanding natural beauty
AoS	appraisal of sustainability
APW	available profile water
AQAP	air quality action plan(s)
AQMA	air quality management area(s)
ASL	advanced stop line(s)
AStSWF	area(s) susceptible to surface water flooding
ASZ	archaeological sub-zone(s)
ATC	automatic traffic count(s)
ATO	accumulated temperature above 0°C
AURN	Automatic Urban and Rural Network
AVDC	Aylesbury Vale District Council
AWC	available water capacity
BAP	biodiversity action plan(s)
BaBCWT	Birmingham and Black Country Wildlife Trust
BBSBD	British Bryological Society Bryophyte Database
BC	Before Christ
BCC	Birmingham City Council
BCR	benefit-cost ratio
BDP	Birmingham Development Plan
BDPO	Birmingham Development Plan Options

Abbreviation	Meaning
BUDP	Birmingham Unitary Development Plan
BFI	Base Flow Index
BFIHOST	Base Flow Index derived using the HOST soil classification
BGL	below ground level
BGS	British Geological Survey
BLS	British Lichen Society
BMV	best and most versatile (agricultural land)
BMWWP	Biological Monitoring Working Party
BNS	biological notification site(s)
BoCC	birds of conservation concern
BPA	British Pipeline Agency
BPM	best practicable means
BS	British Standard
BT	British Telecommunications plc
BuCC	Buckinghamshire County Council
BTO	British Trust for Ornithology
c.	circa
C of E	Church of England
C&I	commercial and industrial
CAAV	The Central Association of Agricultural Valuers
CC	climate change
CCC	Coventry City Council
CCI	Community Conservation Index
CCRA	climate change risk assessment(s)
CCTV	closed-circuit television
CDC	Cherwell District Council
ChDC	Chiltern District Council
CDA	critical drainage area(s)
CDEW	construction demolition and excavation waste
CET	controlled emission toilet(s)
CFA	community forum area(s)
CFMP	catchment flood management plan(s)

Abbreviation	Meaning
CHP	combined heat and power
CI	cast iron
CIEEM	Chartered Institute of Ecology and Environmental Management
CIRIA	Construction Industry Research and Information Association
CLA	Country Land and Business Association
CL:AIRE	Contaminated Land: Applications in Real Environments
CLoHAM	Central London Highway Assignment Model
CML	Chiltern Main Line
CoCC	Committee on Climate Change
CoCP	code of construction practice
CoW	City of Westminster
CoWCS	City of Westminster Core Strategy
CoWUDP	City of Westminster Unitary Development Plan
CPG	Camden Planning Guidance
CPRE	Campaign to Protect Rural England
CPZ	controlled parking zone(s)
CRT	Canal & River Trust
CSM	conceptual site model
CVCHA	Castle Vale Community Housing Association
CVTRA	Castle Vale Tenants & Residents Alliance
DAS	deliverable approach statement(s)
DCA	demographic character area(s)
DCLG	Department for Communities and Local Government
DECC	Department of Energy and Climate Change
Defra	Department for Environment, Food and Rural Affairs
DIO	Defence Infrastructure Organisation
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
DoS	degree of saturation
DPD	development plan document(s)
DPLBAR	Index describing catchment size and drainage path configuration (km)
DPSBAR	Index of catchment steepness (m/km)
DRN	detailed river network(s)

Abbreviation	Meaning
DSA	delivery and site allocation(s)
DTM	digital terrain model(s)
EAP	Euston Area Plan
EclA	ecological impact assessment
EC	European Commission
ECML	East Coast Main Line
EfW	energy from waste
EHP	environmental health practitioner(s)
EIA	environmental impact assessment
ELS	Entry Level Stewardship
EMC	electromagnetic compatibility
EMF	electromagnetic field
EMI	electromagnetic interference
EMR	environmental minimum requirement
EMS	environmental management system
EN	Euro norm
EPO	Environmental Protection Officer(s)
EPUK	Environmental Protection UK
EqIA	equality impact assessment
ES	environmental statement
ETS	emissions trading scheme
EU	European Union
EU ETS	European Union Emissions Trading Scheme
EWL	Euston to Watford Line
EWRL	East West Rail Line
FAAP	Fitzrovia Area Action Plan
FARL	FEH index of flood attenuation due to reservoirs and lakes
FC	TUFLOW Flow constriction layer
FCD	field capacity days
FEH	Flood Estimation Handbook
FGW	First Great Western
FMfSW	Flood Map for Surface Water

Abbreviation	Meaning
FPEXT	Floodplain extent, the fraction of the catchment inundated by a 1 in 100 (1%) annual probability event
FRA	flood risk assessment(s)
FSMS	Field Survey Methods and Standards
FRR	The Flood Risk Regulations 2009
FTE	full-time equivalent
FZM	Flood Zone Map (Environment Agency)
GCN	great crested newt
GCR	Great Central Railway
GDP	gross domestic product
GHG	greenhouse gas(es)
GI	galvanised iron
GiGL	Greenspace Information for Greater London
GIS	geographical information system
GLA	Greater London Authority
GLAAS	Greater London Archaeological Advisory Service
GRIP 3	Governance for Railway Investment Projects (Stage 3) process
GSPZ	groundwater source protection zone(s)
GUC	Grand Union Canal
GVA	gross value added
GWML	Great Western Main Line
GWR	Great Western Railway
GWDTE	groundwater dependent terrestrial ecosystem(s)
HA	Highways Agency
HAWRAT	Highways Agency Water Risk Assessment Tool
HCA	Homes and Communities Agency
HCC	Hertfordshire County Council
HDV	heavy duty vehicle(s)
HER	historic environment record
HEx	Heathrow Express
HFC	hydrofluorocarbons
HGV	heavy goods vehicle(s)
HLS	Higher Level Stewardship

Abbreviation	Meaning
HIA	health impact assessment
HOAC	Hillingdon Outdoor Activities Centre
HOST	Hydrology of soil types
HQ	TUFLOW Flow-Head layer
HRA	habitat regulations assessment
HS1	High Speed One
HS2	High Speed Two
HS2 Ltd	High Speed Two Limited
HSE	Health and Safety Executive
HSI	Habitat Suitability Index
HVAC	heating, ventilation and air-conditioning
HX	Polyline layer providing 1 dimensional-2 dimensional link within TUFLOW
IAG	Interdepartmental Analysts Group
IAQM	Institute of Air Quality Management
ICNIRP	International Commission on Non-Ionizing Radiation Protection
ICE	Institution of Civil Engineers
ICS	International Classification for Standards
ID	identification
IEP	Intercity Express Programme
IMD	infrastructure maintenance depot
IPC	integrated pollution control
IPCC	Intergovernmental Panel on Climate Change
IPEG	increased potential for elevated groundwater
IPPC	integrated pollution prevention control
ISO	International Organisation for Standardisation
ISIS	One-dimensional hydraulic modelling software developed by Halcrow
ITS	Integrated Transport Authority
JLR	Jaguar Land Rover
JNCC	Joint Nature Conservation Committee
$L_{pAeq}$	equivalent continuous A-weighted sound pressure level
$L_{pAeq,T}$	equivalent continuous A-weighted sound pressure level for the time period T
$L_{peq}$	equivalent continuous sound pressure level

Abbreviation	Meaning
$L_{pAeq, day}$	equivalent continuous sound pressure level [day – 07:00-23:00]
$L_{pAeq, night}$	equivalent continuous sound pressure level [night – 23:00-07:00]
$L_{pAFmax}$	maximum A-weighted sound pressure level measured with a fast time constant
$L_{pASmax}$	maximum A-weighted sound pressure level measured with a slow time constant
LAQM	local air quality management
LAQN	London Air Quality Network
LBAP	local biodiversity action plan(s)
LBB	London Borough of Brent
LBC	London Borough of Camden
LBE	London Borough of Ealing
LBG	London Bat Group
LBHa	London Borough of Harrow
LBHi	London Borough of Hillingdon
LBHF	London Borough of Hammersmith and Fulham
LBHFCS	London Borough of Hammersmith and Fulham Core Strategy
LBI	London Borough of Islington
LCA	landscape character area(s)
LCN	London Cycle Network
LCN+	London Cycle Network Plus
LDA	London Development Agency
LDC	Lichfield District Council
LDD	local development document(s)
LDF	local development framework(s)
LDV	Leyland DAF van(s)
LEAP	locally equipped area of play
LEMP	local environmental management plan(s)
LEZ	low emission zone(s)
LFB	London Fire Brigade
LFRMS	local flood risk management strategy
LLFA	lead local flood authority
LGBCE	Local Government Boundary Commission for England

Abbreviation	Meaning
LGS	local geological site(s) (formerly regionally important geological sites)
LGV	light goods vehicle(s)
LIFE	Lotic-invertebrate Index for Flow Evaluation
LIGS	locally important geological site(s)
LiDAR	light detection and ranging
LIP	local implementation plan(s)
LNHS	London Natural History Society
LNR	local nature reserve(s)
LO	London Overground
LPA	local planning authority(s)
LSOA	lower super output area(s)
LTP	local transport plan(s)
LU	London Underground
LUL	London Underground Limited
LVMF	London View Management Framework
LWM	London-West Midlands
LWS	local wildlife site(s)
M and E	mechanical and electrical
MAP	maintenance access point
MAFF	Ministry of Agriculture, Fisheries and Food
MCC	manual classified count
MDp	moisture deficit (potatoes)
MDw	moisture deficit (wheat)
MML	Midland Main Line
MMP	materials management plan(s)
MoD	Ministry of Defence
MOL	metropolitan open land
MoT	Ministry of Transport
MRF	material recycling facility
MSA	mineral safeguarding area(s)
MTBE	methyl tert-butyl ether
N/A	not applicable

Abbreviation	Meaning
NAP	National Adaptation Programme
NBMP	National Bat Monitoring Programme
NBR	National Buildings Record
NCA	national character area(s)
NCC	Northamptonshire County Council
NE	Natural England
NEC	National Exhibition Centre
NFU	National Farmers Union
NGO	non-governmental organisation(s)
NHL	National Heritage List
NHS	National Health Service
NI/TR Policy	Noise insulation and temporary re-housing policy
NLL	North London Line
NLP	Northamptonshire Local Plan
NMR	National Monuments Record
NNR	national nature reserve(s)
NPPF	National Planning Policy Framework
NPS	national policy statement(s)
NT	National Trust
NR	Network Rail
NTEM	National Trip End Model
NTM	National Transport Model
NTS	non-technical summary
NVC	National Vegetation Classification
NVQ	National Vocational Qualification(s)
NVZ	nitrate vulnerable zone(s)
NWBC	North Warwickshire Borough Council
NWLP	North Warwickshire Local Plan
NWLPCS	North Warwickshire Local Plan Core Strategy
OAPF	opportunity area planning framework
OCC	Oxfordshire County Council
OEIS	Organic Entry Level Stewardship
OD	Ordnance Datum

Abbreviation	Meaning
OfWAT	The Water Services Regulation Authority
OLE	overhead line equipment
ONS	Office for National Statistics
OS	Ordnance Survey
OSD	over site development
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
PCU	passenger car unit(s)
PDM	post development model(s)
PFM (also referred to as PLANET)	PLANET Framework Model
PFRA	preliminary flood risk assessment(s)
PIA	personal injury accident(s)
PLANET (also referred to as PFM)	Planning network transport forecast model
PM <sub>10</sub>	particulate matter (with aerodynamic diameter of less than 10 micrometres)
PM <sub>2.5</sub>	particulate matter (with aerodynamic diameter of less than 2.5 micrometres)
POS	public open space(s)
POT	peak(s) over a threshold
PPE	personal protective equipment
PPG	pollution prevention guidelines (Environment Agency)
PPV	peak particle velocity
PRISM	Policy Responsive Integrated Strategy Model
PROPWET	Index of proportion of time that soils are wet
PRoW	public right(s) of way
PSI	proportion of sediment-sensitive invertebrates
PSYM	Predictive SYstem for Multimetrics
PWS	public water supply
QMED	Median annual flood {with 1 in 2 (50%) annual probability event}
QRA	quantitative risk assessment(s)
RAF	Royal Air Force
RBD	river basin district(s)
RBKC	Royal Borough of Kensington and Chelsea

Abbreviation	Meaning
RBKCCS	Royal Borough of Kensington and Chelsea Core Strategy
RBKCUDP	Royal Borough of Kensington and Chelsea Unitary Development Plan
RBMP	river basin management plan(s)
RC	Roman Catholic
RCS	river corridor survey(s)
RDA	regional development agency(ies)
ReFH	Revitalised Flood Hydrograph
RFC	ratio to flow capacity
RFI	radio frequency interference
RFRA	regional flood risk appraisal(s)
RIGS	regionally important geological and geomorphological site(s)
RIM	reservoir inundation mapping
RHS	river habitat survey(s)
RICT	River Invertebrate Classification Tool
RSMD	rolling stock maintenance depot
RPG	registered park and garden
RPZ	root protection zone
RSPB	Royal Society for the Protection of Birds
RSS	regional spatial strategy(s)
RSSB	Rail Safety Standards Board
SA	sustainability appraisal
SAAR	Standard Average Annual Rainfall
SAB	SuDS Approval Body
SAC	special area(s) of conservation
SADC	Stratford-on-Avon District Council
SBDC	South Buckinghamshire District Council
STM	SATURN transport model
SBI	site(s) of biological importance/site(s) of borough importance
SBI. I	site(s) of biological importance - Grade I
SBI. II	site(s) of biological importance - Grade II
SCC	Staffordshire County Council
SDLP	Solihull Draft Local Plan
SEEBP	South East England Biodiversity Partnership

Abbreviation	Meaning
SFRA	strategic flood risk assessment(s)
SIL	strategic industrial land
SINC	site(s) of importance for nature conservation
SLA	special landscape area(s)
SLI	site(s) of local importance
SLINC	site of local importance for nature conservation
SMBC	Solihull Metropolitan Borough Council
SMI	site(s) of metropolitan importance
SMR	Scope and Methodology Report
SMINC	site(s) of metropolitan importance for nature conservation
SNCI	site(s) of nature conservation interest
SNDC	South Northamptonshire District Council
SPA	special protection area(s)
SPD	supplementary planning document(s)
SPG	supplementary planning guidance
SPL	slowly permeable layer
SPR	Standard percentage runoff
SPRHOST	Standard percentage runoff derived using the HOST soil classification
SPZ	groundwater source protection zone(s)
SPZ1	source protection zone 1
SSSI	site(s) of special scientific interest
STP	station travel plan(s)
STW	Severn Trent Water
SUDP	Solihull Unitary Development Plan
SuDS	sustainable drainage system(s)
SVOC	semi-volatile organic compound(s)
SXZ	Point layer providing 1D-2D link within TUFLOW
SWC	surface water crossing(s)
SWMP	site waste management plan(s)
TA	transport assessment
TBC	Tamworth Borough Council
TBM	tunnel boring machine(s)

Abbreviation	Meaning
TEMPRO	Trip End Model Presentation Program
TfL	Transport for London
TIN	technical information note(s)
TLRN	Transport for London Road Network
TMP	traffic management plan(s)
TPC	travel plan coordinator(s)
TPO	tree preservation order(s)
Tp(o)	Time to peak of the instantaneous unit hydrograph
TRaCCA	Tomorrow's Railway and Climate Change Adaptation
TRANSEC	TRANsport SECurity regulator
TRDC	Three Rivers District Council
TWA	traffic works application
TTWA	travel to work area(s)
TUFLOW	Two-dimensional hydraulic modelling software built by BMT WBM
TWUL	Thames Water Utilities Limited
UCL	University College London
UDP	unitary development plan(s)
UK	United Kingdom
UKAPIS	United Kingdom Air Pollution Information System
UKCRA	United Kingdom Climate Change Risk Assessment
UKCIP	United Kingdom Climate Impacts Programme
UKCP09	United Kingdom Climate Projections 2009
UNFCCC	United Nations Framework Convention on Climate Change
URBAN	Flood Studies Report index of fractional urban extent
URBEXT1990	FEH index of fractional urban extent
URBEXT2000	Revised index of urban extent, measured differently from URBEXT1990
UST	underground storage tank(s)
UXO	unexploded ordnance
WC	wetness class
VCP	vitrified clay pipe
VDV	vibration dose value
VOA	Valuation Office Agency
VOC	volatile organic compound(s)

<b>Abbreviation</b>	<b>Meaning</b>
WC	Soil wetness class
WCA	Wildlife and Countryside Act
WDC	Warwick District Council
WyDC	Wycombe District Council
WCoC	Warwickshire County Council
WCC	Westminster City Council
WCS	water cycle strategy(ies)
WCML	West Coast Main Line
WebTAG	Web Transport Analysis Guidance
WeLHAM	West London Highway Assessment Model
WFD	Water Framework Directive
WGCG	Warwickshire Geological Conservation Group
WHO	World Health Organisation
WLL	West London Line
WLWA	West London Waste Authority
WMFS	West Midlands Fire Service
WMRSS	West Midlands Regional Spatial Strategy
WNJPU	West Northamptonshire Joint Planning Unit
WPZ	water protection zone(s)
WRAP	Waste and Resources Action Programme
WSI	written scheme(s) of investigation
ZSL	Zoological Society of London
ZTV	zone(s) of theoretical visibility